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[02685/5790]

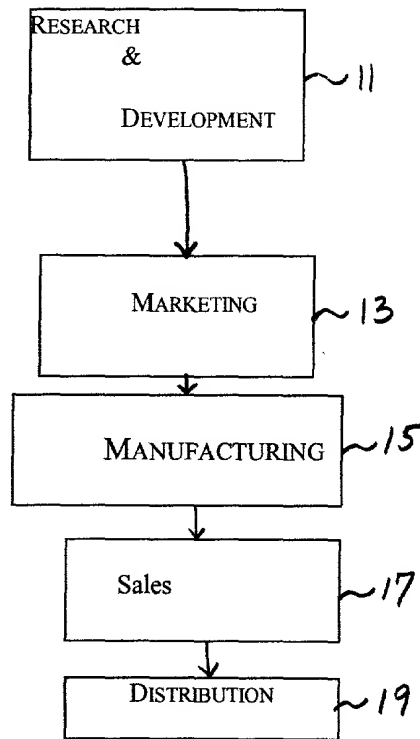


FIG. 1 - PRODUCT CYCLE

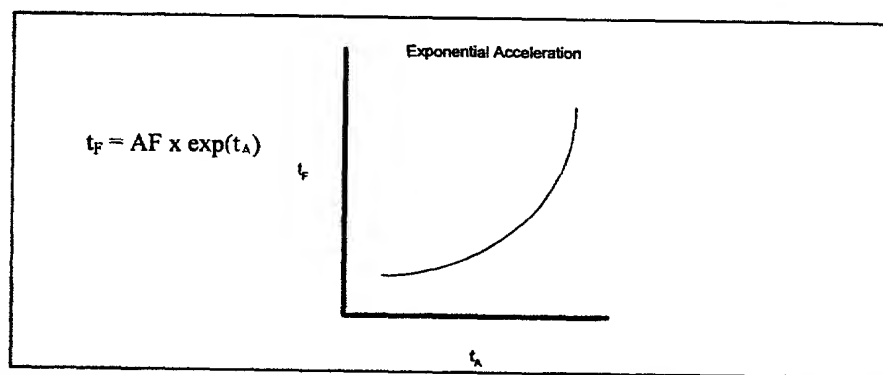


FIG. 2 - Exponential Acceleration

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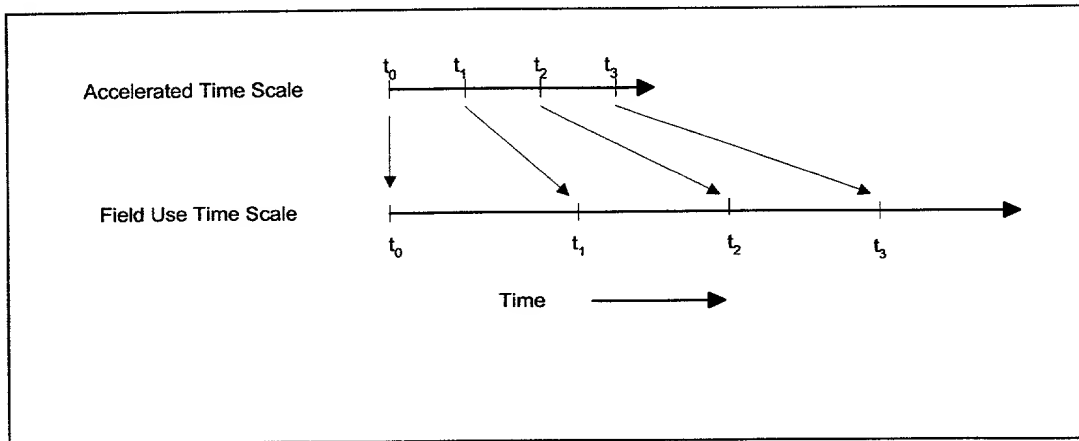


FIG. 3 - Correlation between Accelerated and Field Use Time Scales

UNIT A

	CSS	HSS	RT	Vib	CE	Average Time to Failure	λ
HALT 1 First Failure (time to failure in hours)	2	1.35	0.23	0.88	0.925	1.077	0.929
HALT 2 First Failure (time to failure in hours)	1.525	1.51	1.05	1.38	1.45	1.383	0.723

 \bar{R}^* (see eq. 6)

0.306

 \bar{R} (see eq. 7)

1.36

← ESTIMATE FOR RELATIVE LIFE \bar{R}

BOM MTBF 298462
 MTBF for Redesigned Unit 405908
 (see eq. 12)
 $\text{VAR}(\bar{R}^*) = 0.614$

90% Confidence Limits for \bar{R}^*
 (see eq. 10)

Lower Limit -0.98
 Upper Limit 1.59

90% Confidence Limits for \bar{R}
 (see eq. 11)

Lower Limit 0.374
 Upper Limit 4.900

FIG. 4

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UNIT B

	CSS	HSS	RT	Vib	CE	Average Time to Failure	λ
HALT 1 First Failure (time to failure in hours)	1.23	1.38	1.38	1.48	0.18	1.13	.88
HALT 2 First Failure (time to failure in hours)	2.03	1.38	.225	1.83	.225	1.14	.88

 \bar{R}^* (see eq. 6)

0.0

 \bar{R} (see eq. 7)

1.0

← ESTIMATE FOR RELATIVE LIFE \bar{R}

BOM MTBF 232000

MTBF for Redesigned Unit 232000
(see eq. 12)VAR(\bar{R}^*) = 0.51690% Confidence Limits for \bar{R}^*
(see eq. 10)Lower Limit -1.18
Upper Limit 1.1890% Confidence Limits for \bar{R}
(see eq. 11)Lower Limit 0.306
Upper Limit 3.250FIG. 5UNIT C

	CSS	HSS	RT	Vib	CE	Average Time to Failure	λ
HALT 1 First Failure (time to failure in hours)	1.48	1.20	0.55	1.22	0.81	1.05	0.95
HALT 2 First Failure (time to failure in hours)	1.87	1.30	1.67	1.06	0.33	1.25	0.80

 \bar{R}^* (see eq. 6)

0.20

 \bar{R} (see eq. 7)

1.22

← ESTIMATE FOR RELATIVE LIFE \bar{R}

BOM MTBF 363300

MTBF for Redesigned Unit 443226
(see eq. 12)VAR(\bar{R}^*) = 0.5390% Confidence Limits for \bar{R}^*
(see eq. 10)Lower Limit -.99
Upper Limit 1.3990% Confidence Limits for \bar{R}
(see eq. 11)Lower Limit 0.368
Upper Limit 4.010FIG. 6

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